## EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with George Chaclas on April 17, 2009.

The application has been amended as follows:

**18**. (currently amended) A method for obtaining images of skin condition ~~cancer~~ in skin tissue, the method comprising the steps of:

(a) applying a contrast agent to the skin tissue;

(b) illuminating the skin tissue with polarized light of a first wavelength in an absorption range of the contrast agent and a second wavelength outside an absorption range of the contrast agent;

(c) detecting remitted light that is polarized in a direction parallel to and perpendicular to a polarization of the polarized light;

(d) for each wavelength, converting the remitted light into first data and second data, the first data being representative of the remitted light in a direction parallel to the polarized light and the second data being representative of the remitted light in a direction perpendicular to the polarized light;

(e) producing a difference image for each wavelength by subtracting the respective second data from the first data;

(f) subtracting the second wavelength difference image from the first wavelength difference image to create an image of a layer below a surface of the skin tissue in which background noise is largely cancelled out; and

(g) mapping a skin condition ~~cancer tumor~~ border based on the image.

**27**. (currently amended) An imaging method for imaging a tissue region comprising the steps of:

emitting light having a first wavelength and a parallel polarization direction with respect to the tissue region;

detecting parallel light remitted from the tissue region having the parallel polarization direction and perpendicular light remitted from the tissue region having a polarization direction perpendicular to the parallel polarization direction;

forming a difference image by subtracting the perpendicular light from the parallel light,

whereby a depth of the difference image at or from the surface of the tissue region is determined in accordance with

$$D = 1/(\mu_s (1-g))$$

where D is the depth, $\mu_s$ is a scattering factor of the tissue region and g is an anisotropy factor of the tissue region such that as the wavelength becomes larger, the depth becomes larger;

emitting light having a second wavelength and a parallel polarization direction with respect to the tissue region;

detecting parallel light remitted having the parallel polarization direction and perpendicular light remitted from the tissue region having a polarization direction perpendicular to the parallel polarization direction as a result of the second wavelength illuminating the tissue region; ~~and~~

forming a second difference image related to the second wavelength by subtracting the respective perpendicular light from the respective parallel light; and

creating an image using a plurality of the difference images.

**32**. (currently amended) An imaging apparatus comprising:

means for illuminating organic tissue with polarized light of a first wavelength and a second wavelength;

means for detecting remitted light that is polarized in a direction parallel to and perpendicular to a polarization of the polarized light;

means for converting the remitted light into first data and second data for each wavelength, the first data being representative of the remitted light in a direction parallel

to the polarized light and the second data being representative of the remitted light in a direction perpendicular to the polarized light;

means for producing a difference image for each wavelength by subtracting the respective second data from the first data; and

means for subtracting the second wavelength difference image from the first wavelength difference image and creating ~~to create~~ an image of a layer below a surface of the organic tissue.

**34**. (currently amended) An imaging method comprising the steps of:

obtaining a first image of a tissue using a predetermined wavelength having a first polarization direction;

obtaining a second image of the tissue using the predetermined wavelength and a second polarization direction perpendicular to the first polarization direction;

forming a first difference image from the first image and the second image;

obtaining a third image of the tissue using a second predetermined wavelength having a first polarization direction;

obtaining a fourth image of the tissue using the second predetermined wavelength and a second polarization direction perpendicular to the first polarization direction; and

forming a second difference image from the first image and the second image generated from the second predetermined wavelength; ~~and~~

subtracting the second difference image from the first difference image to remove deep tissue data; and

~~create~~ creating an image of a superficial layer in the tissue.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES KISH whose telephone number is (571)272-5554. The examiner can normally be reached on 8:30 - 5:00 ~ Mon. - Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on 571-272-4956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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JMK